

**ATTORNEY DOCKET NO. 23231.0006U2
PATENT**

What is claimed is:

1. A method for preparing a cell suspension suitable for application to a patient, which method comprises the steps of:
 - (a) subjecting a tissue sample including cells suitable for grafting to a patient, to at least a physical and or chemical dissociating means capable of dissociating cellular stratum in the tissue sample;
 - (b) removing the tissue sample from the dissociating means used in step (a) and harvesting in the presence of a nutrient solution cells from the tissue sample, cells suitable for grafting on to a patient wherein the nutrient solution is (i) free of xenogenic serum, (ii) capable of maintaining the viability of the cells until applied to a patient and (iii) is suitable for direct application to a region on a patient undergoing tissue grafting; and
 - (c) filtering the cellular suspension produced according to step (b) to remove large cellular conglomerates.
2. A method according to claim 1 wherein the enzyme suitable for dissociating cohesive pieces of tissue stratum in the sample is trypsin or a trypsin-like enzyme.
3. A method according to claim 2 wherein the enzyme is selected from the group consisting of trypsin, trypsin-EDTA, dispase, collagenase, thermolysin, pronase, hyaluronidase, pancreatin, elastase and papain.
4. A method according to claim 1 wherein the nutrient solution is Hartmann's solution.
5. A cell suspension produced according to the method of claim 1.
6. A cell suspension according to claim 5 prepared from autologous cells.
7. A method of treating a patient in need of graft surgery, said method comprising the steps of:

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- (a) preparing a cell suspension according to the method of claim 1; and
 - (b) administering the suspension directly to a region on the patient that requires a cell graft in a manner that facilitates spreading of the cell suspension in a relatively even distribution over the graft region.
- 8. Use of a cellular suspension suitable for grafts, which suspension is prepared according to the following steps:
 - (a) subjecting a tissue sample including cells suitable for grafting to a patient, to an enzyme suitable for dissociating cohesive pieces of the tissue stratum in the sample;
 - (b) removing the sample from the enzyme solution used in step (a) and harvesting in the presence of a nutrient solution cells from the tissue sample, which cells are suitable for grafting on to a patient wherein the nutrient solution is (i) free of xenogenic serum, (ii) capable of maintaining the viability of the cells until applied to a patient and (iii) is suitable for direct application to a region on a patient undergoing tissue grafting; and
 - (c) filtering the cellular suspension produced according to step (b) to remove large cellular conglomerates;

for the preparation of therapeutic preparation suitable for the treatment of tissue disorders requiring grafting.
- 9. The use according to claim 8 wherein the nutrient solution is Hartmann's solution.
- 10. An apparatus for developing a tissue regeneration solution, said apparatus comprising:
 - (a) a heating means suitable for heating an enzyme solution to a required temperature and which is capable of maintaining that solution at the desired temperature for a suitable amount of time; and

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(b) a filter recess comprising a filter means capable of separating large cellular congregates from a cellular suspension.

11. The apparatus according to claim 10, which additionally comprises a reservoir capable of holding a tissue sample and a nutrient solution.
12. The apparatus according to claim 10, which includes one or more fluid containment wells for storage of fluids.
13. An apparatus for developing a tissue regeneration solution, comprising a first and second member wherein:

(i) the first member includes:

(a) a heating means suitable for heating an enzyme solution to a required temperature and which is capable of maintaining that solution at the desired temperature for a suitable amount of time;

(b) a filter recess comprising a filter means capable of separating large cellular congregates from a cellular suspension;

(c) at least a fluid containment well for storage of nutrient solution;

(ii) the second member forms a reservoir capable of withholding a tissue sample and nutrient solution in fluid containment; and

wherein the first member provides a seat upon which the second member may be placed during manipulation of the tissue.